Fw: EPA Response to Statements made by Cabot

Joan Schafer to: Ron Borsellino, Kathy Hodgkiss, Dennis Carney 01/30/2012 06:39 AM

From: Joan Schafer/R3/USEPA/US
To: Ron Borsellino/R3/USEPA/US@EPA, Kathy Hodgkiss/R3/USEPA/US@EPA, Dennis Carney/R3/USEPA/US@EPA

FYI -- Not sure if you rec'd this -- but below is the HQ approved desk statement re the Cabot Press Release and their letter to the Adm - joan

Joan Schafer
Senior Communications Specialist
Office of Public Affairs
USEPA - Region 3
1650 Arch Street
Philadelphia, PA 19103
Phone: (215) 814-5143
Fax: (215) 814-5102
e-mail: schafer.joan@epa.gov

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From: Terri-A White/R3/USEPA/US
To: seneca.roy@epa.gov, Joan Schafer/R3/USEPA/US@EPA, sternberg.david@epa.gov
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Subject: EPA Response to Statements made by Cabot

Here is the final approved response to statements Cabot has made regarding EPA's work in Dimock. I've sent this to reporters asking about Cabot's letter to Lisa Jackson and to those asking about the statement Cabot issued to the media. -- Terri

EPA is in this community sampling and providing water as a direct result of requests from Dimock residents. Our priority is the health of the people there, and our actions are guided entirely by science and the law. We are providing water to a handful of households because data developed by Cabot itself provides evidence that they are being exposed to hazardous substances at levels of health concern. We are conducting monitoring as a prudent step to investigate these concerns and develop a sound scientific basis for assessing the need for further action. This is consistent with steps we would take in any situation where we are presented with potential health risks to citizens under the federal laws we are charged to carry out.

In his State of the Union address, President Obama made clear that he is committed to tapping America's natural gas as part of a new era in American energy. He also affirmed our commitment to "developing this resource without putting the health and safety of our citizens at risk."

We have been clear that if we see an immediate threat to public health, we will not hesitate to take steps under the law to protect Americans whose health may be at risk. The Agency also welcomes PADEP and Cabot's participation in the sampling. Without a doubt, EPA's samples will be collected and reviewed using the highest scientific standards and we will take into account all other relevant and reliable data developed by PADEP and Cabot. The residents in Dimock deserve answers based on the facts, and we look forward to working together to meet our responsibility to this community.

U.S. EPA's January 2012 Position on Water Delivery

Cabot is steadfastly committed to constant improvement of our operations, environmental stewardship, collaboration with state regulators, and compliance with all applicable federal, state and local laws. Our track record in Dimock and in all areas in Pennsylvania in which we operate demonstrates that we are always responsive to recommendations and requests to protect both the health of the communities in which we operate and the environment.

Response: EPA took an action to provide alternate water on only a handful of homes (4). The cornerstone of our activity is our sampling of over 60 homes. As stated in the Action Memo, "EPA routinely acts under CERCLA to protect public health first while it acts to further define contamination. Thus, within this action, EPA will complete an assessment of the water quality of the home wells in the Site area to close information gaps as soon as possible. This sampling will be focused initially on evaluating those homes in the Site area that have been sampled in the past. . . In addition, EPA will continue to evaluate all available data, including the sample results, and may revise our actions to provide alternate water to any additional homes, or to cease provision of water, as warranted by the data."

In October 2011, Cabot provided water sampling data to the Pennsylvania Department of Environmental Protection (PADEP) following sampling events conducted in Dimock Township. The data was also placed on the Cabot website at www.cabotog.com. Based on testing of a range of constituents, PADEP concluded that Cabot met its obligations under the consent order and settlement agreement. After reviewing the data, on December 2, the EPA concluded "the data does not indicate that the well water presents an immediate health threat to user". In January, with no additional credible data, the EPA reversed their decision and came to a different conclusion from PADEP by using data points that do not accurately represent the water quality and are inconsistent with the overall body of data collected at each residence by Cabot, PADEP, and other independent parties. PADEP has been critical of EPA's subsequent intervention.

Response – EPA's statement, on Dec. 2, that the data it reviewed presented no immediate health threat was based on information it had as of that date. EPA actually identified its position at that time as a preliminary review and screening of the Cabot and PADEP data provided to us principally by the PADEP. When the data was received it was characterized to EPA as all available data covering the period from Spring 2008 thru September 2011. EPA further noted that we would continue to review additional information related to the concerns of the Dimock residents as that information presented itself. On December 6th EPA received data from the residents' counsel which had been gathered by Cabot consultants per direction of PADEP. PADEP had required that Cabot investigate reported spills at well drilling operations in the area. The reports EPA received were for samples taken in August and September 2011 and identified the existence of

organics in drinking water, data we had not previously reviewed. The new information coupled with an awareness that the Agency's Screening Levels had been lowered for certain contaminants to account for child receptors necessitated us to re-visit our previous decision that there was not an imminent and substantial endangerment.

EPA stated publicly in the January 19 Action Memorandum, that its decision was based on existing, non-EPA data of uncertain quality and data verification. EPA has emphasized that the Agency "routinely acts under CERCLA to protect public health first while it acts to further define contamination." As stated in the Action Memo, data gaps along with uncertain data quality and verification underscore the need for EPA's independent sampling effort. EPA also stated that it will continue to review available data and new sample results, and may revise its conclusions again if the data merits, to determine whether to provide additional homes with alternate water or to cease providing water.

Most recently, in a statement dated January 20, 2012, EPA announced its belief that four Dimock residences should have replacement water delivered due to Agency concerns. Cabot has reexamined the data relevant to EPA's January 2012 statement. Based on this reexamination, it appears that EPA selectively chose data on substances it was concerned about in order to reach a result it had predetermined. EPA chose to include specific data points without adequate knowledge or consideration of where or why the samples were collected, when they were taken, or the naturally occurring background levels for those substances throughout the Susquehanna County area. The end result is an unwarranted investigation and unnecessary delivery of water.

Response –EPA followed our standard practices and procedures in choosing data points which reflect the highest concentration for substances of concern. When EPA collects samples, we typically conduct targeted sampling to determine the presence of a threat or potential threat. This standard practice, when conducting investigations, ensures the protection of public health as our actions need to consider the highest levels to which the public may be exposed. Based upon an EPA review (PA State Geological Survey and US Geological Survey) of background concentrations of arsenic and manganese in groundwater, the levels found in wells at the Dimock site are higher than median values for those substances.

Examples of EPA's Selective and Inconsistent Use of Data

• The only data point EPA selected as evidence of high levels of arsenic in the water well at the Ron and Jean Carter residence was actually collected from the local public water supply. That sample was collected at the request of the plaintiffs and their attorneys. The well water samples taken at this residence and the other three residences show arsenic levels that are all below EPA primary contaminant levels. This makes sense that arsenic is present as it is a naturally occurring substance. It is not associated with natural gas drilling.

Response - The high arsenic level for this home is in fact a measurement taken by Cabot of water provided to the homeowner by Cabot. EPA's OSC became aware of this fact when we reexamined Cabot data in response to this statement by Cabot. Regardless, Cabot's provision of water with arsenic at levels that

exceeded a primary maximum contaminant level (MCL) is of concern to EPA. Cabot had a responsibility to provide potable water meeting State standards, per Pennsylvania's regulations (25 Pa. Code § 78.51), and the PADEP CO&A. Furthermore, Cabot's claim that arsenic is present at elevated levels in the area because it is naturally occurring is misleading. An EPA review (PA State Geological Survey and US Geological Survey) of background concentrations of arsenic in groundwater, shows that of 78 sample points in Susquehanna County alone, only three samples exceeded an arsenic level of 5ug/l (the MCL is 10 ug/l). Yet three of the first eight homes whose data EPA reviewed had arsenic results in excess of 5 ug/l.

• Manganese levels in the four water wells for the residents where water will be delivered are higher than EPA secondary contaminant level standards, but they are in line with the levels which naturally occur throughout the Susquehanna County area. The secondary contaminant levels for substances are established in relation to the color and taste of water and do not indicate any possible human health concerns. As with arsenic, this makes sense, as manganese is not associated with natural gas drilling and is a naturally occurring substance.

Response – While manganese is, in fact, naturally occurring in Susquehanna County, the levels found in the Dimock area are not necessarily consistent with background concentrations typically found in the water bearing zones where the Dimock home owners draw water for their private wells. Based upon an EPA review (PA State Geological Survey and US Geological Survey) of background concentrations of manganese in groundwater, the levels found in wells at the Dimock site while within a wide range (10ug/l – 13,600 ug/l) are higher than median values. In fact, the levels are so high that they trigger a hazard quotient greater than 2 indicating a significant non-cancer health concern if the water is consumed by the home owner. It was this non-cancer health concern and not any exceedances of secondary MCLs which supported EPA's decision to provide alternate water to some homes. Finally, PADEP's December 15, 2010 Consent Order and Agreement (COA) determined that the 18 home wells covered by the COA were "affected from the drilling activities at the Dimock/Carter Road Gas Wells." [COA p.2, para.F]. PADEP's November 4, 2009 COA documents numerous spills and releases from these drilling activities. What effects these drilling activities and spills may have had on the elevated levels of naturally occurring substances being observed at times in home wells is unclear.

• EPA said it is concerned about the levels of sodium in the well water even though the Agency has never established a water quality standard for sodium. Moreover, the sodium concentration EPA selected to represent the well water for the Craig and Julie Sautner residence was sampled after the water had undergone treatment, which included a water softener. Water softeners reduce water hardness by replacing calcium and magnesium with sodium, therefore raising the overall sodium concentration high above the pre-treatment level. A review of the complete Sautner sodium data set shows that when the water samples were collected pre-treatment (and thus before going through a water softener) the concentrations were 3-4 times less than when samples were collected post-treatment.

Response - EPA did not act on sodium as a basis for providing alternate water at any homes. However, the elevated levels of sodium are higher than would be reasonably expected if they were naturally occurring. Our sampling will help us further evaluate this situation.

Concentrations for all residents were within naturally occurring background concentrations for the area. It should also be noted that the local public water supply serving the entire Borough of Montrose (which EPA is having delivered to the four residents identified) has a reported sodium concentration of 51,000 ug/L, which is substantially above the level that EPA established as a condition for water delivery. This data is available for review on the Pennsylvania American Water website listed below

Response – EPA is currently using water from the Borough of Easton, PA as our alternate water source so suggestions about what levels of sodium are present in water at the Pennsylvania American Water (Montrose system) are irrelevant. Furthermore, discussions regarding sodium are in general unnecessary as EPA did not act on sodium as a basis for providing alternate water at any homes.

• EPA's claims of "concerning" levels of glycols are also misleading. Those levels are well below the ATSDR advisory level referenced by the U.S. EPA, and in fact, the concentrations were reported at such a low level there is a question as to whether the glycols were present at all. Furthermore, during the investigation, similar concentrations were identified for these compounds in commercially available nationally branded bottled water and from groundwater in areas well outside any drilling operations. Moreover, the concentrations of di(2-ethylhexyl) phthalate (DEHP) identified by EPA, associated with the four residents receiving water, are all below its primary maximum contaminant level .

Response - The Action Memo discusses the presence of organics. This is a reason for the sampling activities we are undertaking. The detection limits used by Cabot and their contractors for some of the glycol analyses are not low enough to detect glycols at concentrations which present a threat to human health. These chemicals , which are not naturally occurring and would not normally be found in private well water. This is why it is important for EPA to collect our own data to facilitate interpretation. Glycols are typically used in natural gas drilling operations as a winterizing agent and/or product stabilizer (see Frac Focus Chemical Disclosure Registry at www.fracfocus.org), As stated in the Action Memorandum, based upon Cabot's drilling operations in the area, and spills and releases documented by PADEP , there is reason to believe that a release of hazardous substances has occurred. Again, the principal purpose of EPA's sampling program is to identify the existence, and, to the extent possible, the concentrations and risk presented by glycols and other contaminants. Finally, regarding the glycols, it is relevant to note that one home in Dimock had levels of ethylene glycol that exceeded EPA's risk screening levels. EPA chose not to provide alternate water to this home, because the homeowner is temporarily residing outside the area and not using the home well. While Cabot is correct that DEHP levels did not exceed any regulatory thresholds, the mere presence of a substance which is not naturally occurring, would not be expected in private well water.

Cabot stands by its assessment that the data shows there are no health concerns with the water wells. Cabot desires to set the record straight. Science, and its conclusions, must be our priority and cornerstone.

Response – EPA intends to use sound science and validated data to draw conclusions about the need for alternate water for homes in the Dimock area. In the meantime while sampling is being conducted and until we have examined those quality assured results, EPA believes it is prudent and responsible to provide alternate water to homes with apparent health concerns. Cabot was provided an opportunity to provide water in lieu of EPA and declined.

The specific data at each residence

Resident 4 (Craig and Julie Sautner)

• EPA's arsenic level is lower than the primary maximum contaminant level. In fact, none of the samples have exceeded the level; most are non-detect values.

Response: This is one property where the arsenic level while below the MCL was still above the media value for background groundwater as identified in a review of 78 data points in Susquehanna County by the PA Geological Survey and the USGS.

• For the manganese value, the EPA selected a data point that is nearly three years old (collected 3/26/2009). Further, this data was one of only three samples that showed concentration levels above the secondary contaminant level for manganese, which was developed based on aesthetics such as taste and appearance, not for human health concerns. The other 43 water samples collected over the past several years – including samples collected in the past year and a half – consistently show the concentration to be below this secondary contaminant level. Moreover, all the manganese results fall within the naturally occurring concentrations in the area.

Response – EPA's standard practice when conducting investigations, ensures the protection of public health, as our actions need to consider the highest levels to which the public may be exposed. We acknowledge that there have been dozens of samples taken at this home and only a handful have shown elevated manganese above a secondary MCL. In turn, we have not received information from Cabot that demonstrates the quality assurance procedures they followed in their sampling and analytical practices. Furthermore, the one sample level was so high that a review by Agency risk assessors resulted in a determination that a non-cancer risk existed. It was this non-cancer health concern and not any exceedances of secondary MCLs which supported EPA's decision to provide alternate water to this home. This data point contrasted with other data points offered by Cabot supports the need for EPA's sampling program to determine the current quality of the homeowner's well water.

• The water sample for EPA's sodium data point was taken from post-treatment water (which includes a water softener). An elevated sodium level is natural due to the water

softening process. Additionally, this data point is also more than three years old (collected 11/19/2008). More recent well water data shows a range for sodium concentrations that is less than the Montrose public water supply.

Response – EPA did not act on sodium as a basis for providing alternate water at this home or other homes. Regardless, the levels of sodium at this home are exceedingly high, both pre- and post-treatment. While water softening may have contributed to the post-treatment value, the highest pre-treatment value of 26,000 ug/l taken at the same time as the post-treatment level being referenced by Cabot exceeded a secondary MCL.

Resident 6 (Ex. 6 - Personal Privacy

• EPA's initial analysis identified a concentration of DEHP for the Nolan Ely residence approximately four times higher than the primary maximum contaminant level as a reason to require water delivery. EPA retracted its stated concern after realizing the sample was NOT taken from the Nolan Ely well but from a well several miles away in Brooklyn which is not associated with gas drilling activities. To our knowledge, EPA has not offered to supply water to the Brooklyn residence.

Response – Cabot's data packages, as available to EPA, are often poorly organized, difficult to interpret and lacking quality assurance/quality control plans. EPA and Cabot are currently working to arrange a meeting where we hope to receive from Cabot some clarifications on their data packages. Regardless, this situation contributed to EPA's initial belief that a health concern may exist at this property. EPA later determined that the well, which was labeled as existing on the resident's property, was in fact a well located elsewhere in the Dimock area. At that location, the well is used only in conjunction with a barn, and the water is not used for human consumption. Regardless, the property where the well exists is not in Brooklyn, PA, as asserted by Cabot. This situation reinforces the need for EPA's sampling program to protect the public health.

• The arsenic value cited is below the primary maximum contaminant level and is within naturally occurring background levels for the Susquehanna County area.[2]

Response: This is one property where the arsenic level while below the MCL was still above the media value for background groundwater as identified in a review of 78 data points in Susquehanna County by the PA Geological Survey and the USGS.

• EPA's manganese value is the maximum detected value. It discounts the majority of the results, including the most recent ones. All the manganese results fall within the naturally occurring concentrations in the area.

Response - EPA's standard practice, when conducting investigations, ensures the protection of public health as our actions need to consider the highest levels to which the public may be exposed. This sample level was so high that a review by Agency risk assessors resulted in a determination that a non-cancer risk existed. It was this non-cancer health concern and not any exceedances of secondary

MCLs which supported EPA's decision to provide alternate water to this home. The data point supports the need for EPA's sampling program to determine the current quality of the homeowner's well water.

• EPA's sodium data point is the maximum value, was collected 18 months ago and is inconsistent with data collected since September 2010 (being consistently in the range of 70,000-80,000 ug/L). All of the concentrations detected fall within naturally occurring levels.

Response - EPA did not act on sodium as a basis for providing alternate water at this home or other homes. While true that the September 2010 level is higher than has been found in samples taken since that time, sodium values in the range of 70,000 to 80,000 ug/L are exceedingly high. These values average four times the secondary MCL of 20,000 ug/l and potentially present health concerns, should users have a sodium-restricted diet. Abnormally high concentrations of sodium) may be indicators of a greater problem which can be better assessed with additional sampling data.

Resident 7 Ex. 6 - Personal Privacy

• EPA's arsenic value is below the primary maximum contaminant level and within naturally occurring background levels for the Susquehanna County area.

Response: No comment

• EPA's manganese levels are within the naturally occurring background range.

Response – EPA's standard practice, when conducting investigations, ensures the protection of public health as our actions need to consider the highest levels to which the public may be exposed. A particular manganese sample result at this home was so high that it a review by Agency risk assessors resulted in a determination that a non-cancer risk existed. It was this non-cancer health concern and not any exceedances of secondary MCLs which supported EPA's decision to provide alternate water to this home. This data point also supports the need for EPA's sampling program to determine the current quality of the homeowner's well water. It should also be noted that this resident's well also presented glycol levels of3,400 ug/l. Glycol is a substance which is not naturally occurring and would not be expected in private well water.

Resident 8 Ex. 6 - Personal Privacy

• EPA's arsenic value cited is from a sample of the local public water supply that is provided to the town of Montrose by Pennsylvania American Water. It is not representative of the groundwater well. All the other arsenic values associated with the water well are below the primary maximum contaminant level.

Response - The arsenic level for this home is in fact a measurement taken by Cabot of water provided to the homeowner by Cabot. EPA's OSC became aware of this fact when we reexamined Cabot data in response to this statement by Cabot. Regardless, EPA has reviewed with PADEP the drinking water quality

reports from the PA American Water Company (Montrose system) and found that there had been no exceedances for arsenic during the period when Cabot was delivering water. Given that the water provided by Montrose did not have any exceedances for arsenic, yet the provided water showed levels exceeding the MCL for arsenic, there is a potential that the contamination could have been caused by cross-contamination in Cabot's contractor's water delivery truck. Cabot's provision of water with arsenic at levels that exceeded regulatory limits, water that at the time was being used by the homeowner, is of concern to EPA. Cabot had a responsibility to provide potable water meeting State standards, per Pennsylvania's regulations (25 Pa. Code § 78.51), and the PADEP CO&A.

- EPA's sodium concentration is from a data point that is more than two years old (collected 12/26/2009) and represents only a single point in time. The 18 other sample results available for sodium prior to and following this time were not considered by EPA. Nonetheless, all 19 sodium samples fall within that normally expected for the area and are below that reported for the public water supply for the Borough of Montrose.

Response - EPA did not act on sodium as a basis for providing alternate water at this home or other homes. Regardless, the sodium value at this home was two times the secondary MCL. This is an abnormally high concentration.

- As with sodium, EPA has selected the maximum value detected for manganese, discounting the majority of the results, including the most recent. All results fall within the naturally occurring concentrations in the area.

Response – The manganese value at this home was eight times higher than the secondary MCL. Again this raises questions as to whether one can assert that this value is naturally occurring. Regardless, EPA did not act on manganese as a basis for providing alternate water at this home.

- The DEHP concentration cited by EPA is 2.61 ug/L and is below the primary drinking water level.

Response: No comment.

In Conclusion: EPA took an action to provide alternate water on only a handful of homes (4). The cornerstone of our activity is our sampling of over 60 homes. As stated in the Action Memo, "EPA routinely acts under CERCLA to protect public health first while it acts to further define contamination. Thus, within this action, EPA will complete an assessment of the water quality of the home wells in the Site area to close information gaps as soon as possible. This sampling will be focused initially on evaluating those homes in the Site area that have been sampled in the past. . . In addition, EPA will continue to evaluate all available data, including the sample results, and may revise our actions to provide alternate water to any additional homes, or to cease provision of water, as warranted by the data."